The most valuable thing learned in training

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Cardiothoracic surgical training is notoriously intense and rigorous. This intensity translates into the opportunity to participate in many different clinical situations in a short time. It allows one to absorb as much experience and mentorship as possible.

A large part of this experience is passed down from professors and mentors. Every trainee is innately aware of this. The idea is to walk away with the best from everyone, to immerse into a culture that will support one for a lifetime. There are innumerable aspects to a successful and competent surgeon: technical ability, knowledge, and judgment among many others. We all develop and then continue to evolve a style. The evolutionary pressures put on by a training program will be the most important part of the fellowship.

As a new attending, many questions sweep through your mind. Does a situation require urgency or patience? Do I need additional information? Is this surgery safe? What do I do if things go wrong; do I have a backup plan? Is there a creative solution to this unique problem? The answers to many of these questions cannot be found in a book or journal. Your new practice might give you an opportunity to get those answers, but it might not. In training, there is no such thing as a bad or a boring case. They all have value, even if it is another mediastinoscopy as you are trying to go home after a week of call, or a leaking esophageal anastomosis at 2 am. The basics of general surgery are also hard to make up; the maturity earned at every step is important.

We are a product of those who came before us. There are opinions, advice, technical skills, and approaches that influence us every day. Each is valuable in the moment that it is needed. One example may be a particular surgical approach that provides exposure and familiarity. You might have read about it, seen a video, etc. Figuring out how to translate an operative plan into an actual operation makes each program unique. Calling old professors and picking the brain of the thoracic community for a case, routine or unusual, should not be rare. At a symposium, it's a lot of fun to pick someone's brain on even a basic case. The art of what we do blossoms, and often this is more valuable than any of the scripted talks.

Drs Dettterbeck and Kraev at Yale–New Haven Hospital.

Central Message

Modern thoracic surgery is a pyramid built on a foundation of mentors and professors. Not all of them are famous to the world, but they are ingrained in every trainee's mind.

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An example of a valuable program-specific approach is a vertical thoracotomy that spares the latissimus and serratus muscle. It is not a novel concept. Dr Frank Dettterbeck teaches this as a standard at Yale–New Haven Hospital. This approach carries into many operations and has the advantage of less trauma to major muscle groups, translating into quicker recovery and less pain. Additionally, these muscles are preserved for future use if needed. The approach is cosmetically appealing, easily hiding under the arm. The same incision can be used as a working port for video-assisted thoracoscopic surgery, allowing only intercostal muscle to be cut. Dr Kraev returns to it over and over, and has dubbed it the “Dettterbeck thoracotomy.” It's the 3 chords of “Moonlight Sonata” that develop into a complex composition with infinite possibilities of variation. It is harder to learn, but it is invaluable when going into an unknown infected field. For the same reason, there is a “Boffa pickup” in the instrument set. Truly, they are the Geister minicardiac DeBakey pickup. When the pulmonary artery is hunted, approaching it posteriorly from the hilum on a lower lobectomy, Dr Anthony Kim's name gets tagged. Further into practice, partners get the same honors, such as the Millikan retractor (a broader Finocchetto retractor). It does not matter who wrote or discovered it, as long as the title used gets you and your team playing the same score.

The collective experience of thoracic surgery is not centered at any program. At the end of the day, no particular

institution has the magic solution. But to all fellows, their training is their home. Many factors shape our independent practice, but there is a prodigal son in all of us. One will not learn everything during formal education, but the little tricks will solidify how to keep learning. The culture of each department will serve as a denominator.

The culture is what makes up the stories we all carry away. The morbidity and mortality conferences we cite to our partners and colleagues for years to come, the tragic bloopers and the moments of comedy we go over with the staff; these are all examples of little things that happen only once, and only at one place. But all of us shared them, and we use them to continue stitching the fabric. These moments are invaluable, unpredictable, and don't

happen within certain hours. They underline that graduation is just a soft stop in a continuity of surgical evolution.

Each cardiothoracic surgical resident follows a national curriculum and prepares for the same board examination. Every program must adhere to strict rules and provide certain experiences. There are unique aspects to each program, however, stemming from its "giants." The Detterbeck thoracotomy is just one example. Just as the Harkin clamp is universal, the Boffa pickup is something unique that will serve for years. The most valuable part of training is not what is common to all trainees but what is unique to the rigors of each program. Our mentors and the culture they create guide us throughout our own careers and provide the framework to fill for the rest of our careers and lives.